

What is Agro-Informatics?

AEC3012

Hoyeon Jeong

Chonnam National University

hjeong@jnu.ac.kr

Dept. Agricultural Economics

August 7, 2025

Food and Agriculture Organization (FAO)

Agro-informatics connects information technology with the farm management, analysis and application of agricultural data to design more accurate and targeted agricultural interventions.

Examples of The Use of New Technology in Agriculture

Satellite Imagery

Remote Sensing

Geographic Information Systems (GIS)

Information and Technology enable the transformation of data into actionable information.

Benefits of Agro-Informatics

- Enhanced Decision Making: With real-time data on soil health, weather patterns, and crop growth, farmers can make informed decisions that maximize their yield.
- Resource Optimization: Agriculture informatics helps optimize the use of resources such as water, fertilizers, and pesticides, reducing waste and environmental impact.
- Precision Agriculture: Through GPS and remote sensing technologies, farmers can precisely target their interventions, minimizing costs and environmental harm.

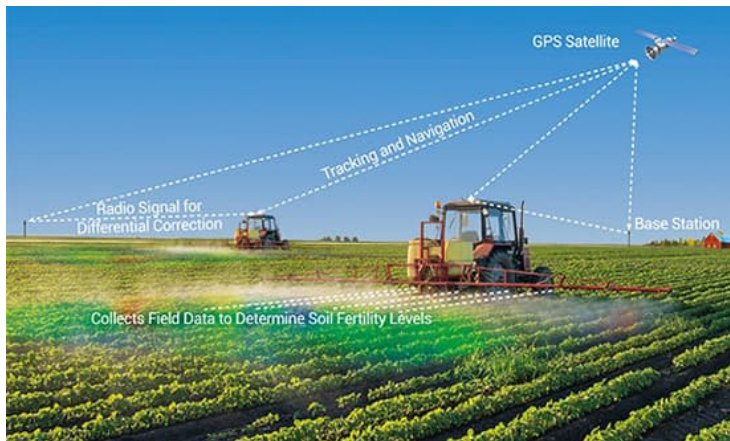
Benefits of Agro-Informatics

- Early Disease Detection: Monitoring tools and data analysis enable the early detection of disease outbreaks, preventing their spread and minimizing losses.
- Supply Chain Efficiency: Informatics streamlines the supply chain, reducing post-harvest losses and ensuring fresher produce reaches consumers.

Example of Agro-Informatics



Example of Agro-Informatics



Example of Agro-Informatics



In this class,

- We will combine agricultural economics and computer science.
- We will learn about how to collect, store, and analyze a variety of data used in agricultural economics.

- A variety of sources of data and information related to agricultural economics
- KOSIS (Statistics Korea, Bank of Korea, Government Agencies, etc)
- International Agricultural Data (World Bank, FAO, etc)

- Database Management System (DBMS, e.g., MS ACCESS)
- Enterprise Resource Planning (ERP)
- Structured Query Language (SQL)